Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended) A coin processing system for processing a plurality of coins of mixed denominations, comprising:

a rotatable disc for imparting motion to the plurality of coins;

an encoder attached to the rotatable disc for producing an encoder pulse for each incremental movement of the rotatable disc;

a memory adapted to store master denominating characteristic information including a plurality of predetermined numbers of encoder pulses, each predetermined number of encoder pulses corresponding to the size of a particular coin denomination the coin processing system is to adapted to process;

a stationary sorting head having a lower surface generally parallel to and spaced slightly away from the rotatable disc, the lower surface forming a coin path for directing the movement of each of the coins and a coin exit region for sorting and discharging coins of particular denominations;

a light source for outputting a light beam that traverses transverses the coin path;

a light detector for detecting the light beam, the light detector being adapted to generate a light-detection signal indicative of detecting the light beam, each coin moving along the coin path passing through the light beam resulting in the suspension of the generation of the light-detection signal; and

a controller adapted to receive the encoder pulses from the encoder, the controller adapted to receive the light-detection signal from the light detector, the controller being adapted to determine the number of encoder pulses received during a period of non-receipt of the light-detection signal caused by each coin passing through the light beam, the controller being adapted to compare the determined number of encoder counts to the stored master denominating

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characteristic information upon resuming to receive the light-detection signal form the light detector.

2.   (Original Claim) The coin processing system of claim 1 wherein the controller is adapted to determine the denomination of the coin passing through the light beam when the determined number of encoder pulses favorably compares to the stored master denominating characteristic information.

3.   (Currently Amended) The coin processing system of claim 1 wherein the light beam comprises a laser beam.

4.   (Currently Amended) The coin processing system of claim 3 wherein the light source is a single laser diode.

5.   (Original Claim) The coin processing system of claim 1 wherein the light detector is a photodetector.

6.   (Original Claim) The coin processing system of claim 1 further comprising at least one light guide for guiding light received from the light source to the light detector.

7.   (Original Claim) The coin processing system of claim 6 wherein the light guide has an inlet disposed along the coin path opposite the light source.

8.   (Original Claim) The coin processing system of claim 1 further comprising a diverter disposed along the coin path beyond the light source, the diverter being moveable between a first position for permitting coins to proceed to the plurality of exit channels and a second position for diverting coins to a reject region.

9.   (Original Claim) The coin processing system of claim 8 wherein the controller causes the diverter to move from the first position to the second position when the number of

encoder pulses determined when a coin passes through the light beam does not favorably compare to the stored master denominating characteristic information.

10.   (Currently Amended)   A method for processing coins with a coin processing system including [[a]] at least one coin path and [[a]] at least one coin exit region for sorting and discharging coins of particular denominations, the system including a light source, disposed on one side of the coin path, for emitting a light beam ~~traverse~~ across the coin path to a light detector disposed on another side of the coin path, comprising:

~~generating a light-detection signal with a light detector, the light-detection signal being indicative of the light detector detecting the light beam transversing the coin path;~~

~~receiving the light-detection signal with a controller;~~

moving a coin along the coin path;

interrupting, with the coin moving along a portion of the coin path between the light source and the light detector, the light beam traversing ~~transversing~~ the coin path such that the light beam is not incident on the light detector ~~detection signal is not generated by the light detector~~;

counting, with the controller, the number of encoder pulses generated by an encoder during the interruption of the light beam; and

comparing the counted number of encoder pulses to a plurality of stored numbers of encoder pulses corresponding to the particular coin denominations.

11.   (Currently Amended)   The method of claim 10 wherein the light beam comprises a laser beam.

12.   (Currently Amended)   The method of claim 10 comprising determining the denomination of the coin when the counted number of encoder pulses favorably compares to one or more of a plurality of stored numbers of encoder pulses corresponding to the particular coin denominations.

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13.   (Currently Amended) The method of claim 10 comprising determining the coin to be an invalid coin when the counted number of encoder pulses does not favorably compare to a ~~plurality of stored numbers~~ number of encoder pulses corresponding to ~~the~~ a particular coin ~~denominations~~ denomination.

14.   (Original Claim) The method of claim 13 comprising diverting the coin from the coin path when the coin is determined to be an invalid coin.

15.   (Original Claim) The method of claim 10 further comprising receiving the light beam with at least one light guide and directing the received light to the light detector.

16.   (Currently Amended) ~~A~~ The method of claim 10 ~~for determining the denomination of a coin~~, further comprising:

    ~~moving a coin along a coin path;~~

    ~~directing a light beam transverse the coin path;~~

    ~~generating a light-detection signal with a light detector, the light-detecting signal being indicative of the light detector detecting the light beam transversing the coin path;~~

    ~~interrupting, with the coin moving along the coin path, the light beam transversing the coin path;~~

    generating at least a first signal event corresponding to an interruption of the light beam by a leading edge of the coin moving along the coin path ~~suspending the generation of the light-detection signal while the coin is interrupting the light beam transversing the coin path~~;

    generating at least a second signal event when the light beam is incident to the light detector following the act of the generating at least a first signal event;

    ~~resuming the generation of the light-detection signal upon the coin not interrupting the light beam transversing the coin path;~~

    counting a number of encoder pulses occurring between the acts of generating at least the first signal event and generating at least the second signal event ~~during the suspension of the generation of the light-detection signal~~; and

comparing <u>at least</u> the counted number of encoder pulses to a plurality of stored numbers of encoder pulses corresponding to the particular coin denominations.

17.   (Currently Amended) The method of claim <u>10</u> ~~16~~<u>, further comprising:</u>

<u>generating a first light-detection output when the light beam traversing the coin path is incident upon the light detector; and</u>

<u>generating a second light-detection output when the light beam traversing the coin path is not incident upon the light detector</u> ~~wherein the light beam comprises a laser~~.

18.   (Original Claim)   The method of claim 16 comprising determining the denomination of the coin when the counted number of encoder pulses favorably compares to a plurality of stored numbers of encoder pulses corresponding to the particular coin denominations.

19.   (Original Claim) The method of claim 16 comprising determining the coin to be an invalid coin when the counted number of encoder pulses does not favorably compare to a plurality of stored numbers of encoder pulses corresponding to the particular coin denominations.

20.   (Original Claim) The method of claim 19 comprising diverting the coin from the coin path when the coin is determined to be an invalid coin.

21.   (Original Claim) The method of claim 16 further comprising receiving the light beam with at least one light guide and directing the received light to the light detector.

22.   (Currently Amended) A method for determining the denomination of a coin with a disk-type coin processing system, comprising:

moving a coin along a coin path with a rotatable disk;

generating an encoder pulse for each incremental movement of the rotatable disk;

directing a light beam <u>to traverse</u> ~~transverse~~ the coin path;

interrupting the light beam <u>traversing</u> ~~transversing~~ the coin path for a period in which the coin is moving through the light beam <u>traversing</u> ~~transversing~~ the coin path;

counting a number of encoder pulses occurring during the period; and

comparing the counted number of encoder pulses to a plurality of stored numbers of encoder pulses corresponding to the particular coin denominations.

23.   (Currently Amended) A method for determining the denomination of a coin with a disk-type coin processing system, comprising:

moving a coin along a coin path with a rotatable disk;

generating an encoder pulse for each incremental movement of the rotatable disk;

directing a light beam to traverse ~~transverse~~ the coin path;

detecting the light beam with a light detector;

developing a signal at the light detector indicating the presence of a coin in the coin path;

counting a number of encoder pulses occurring while developing the signal at the light detector; and

comparing the counted number of encoder pulses to a plurality of stored numbers of encoder pulses corresponding to the particular coin denominations.

24.   (Currently Amended) The method of claim 23 wherein developing further comprises:

generating a signal at the light detector that is ~~proportion~~ proportional to the amount of detected light,

comparing the generated signal to a threshold value stored in memory; and

determining the signal to be a signal indicating the presence of a coin in the coin path when the generated signal is below the threshold value.

25.   (Original Claim) The method of claim 24 wherein the generated signal is a voltage signal.

26.   (New) The method of claim 24, further comprising:

interrupting the light beam traversing the coin path for a period in which the coin is moving through the light beam traversing the coin path.

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27.   (New) The coin processing system of claim 1, wherein the stationary sorting head lower surface forms a common coin path which directs the movement of all coins prior to sorting of coins having different denominations into separate coin paths for discharge from an exit region associated with a particular denomination, and wherein said light source is disposed to output a light beam that traverses the coin path at a point along such common coin path.